Claremont Colleges
working papers in economics

Claremont Graduate University • Claremont Institute for Economic Policy Studies • Claremont McKenna College • Drucker Graduate School of Management • Harvey Mudd College • Lowe Institute • Pitzer College • Pomona College • Scripps College

August 2001
Preliminary Draft
Organizationally Challenged
Comments Appreciated

The Political Economy of External Discipline: Constraint Versus Incentive Effects of Capital Mobility and Exchange Rate Pegs

Thomas D. Willett
School of Politics and Economics
Claremont Graduate University
160 East 10th Street
Claremont, CA 91711
Tel: 909- 621-8787
Fax: 909-621-8460
E-Mail: Thomas.Willett@cgu.edu

Paper prepared for delivery at the 2001 Annual Meeting of the American Political Science Association, San Francisco, August 30-September 2, 2001.
This paper was initially entitled "Pegged Exchange Rates and Political Incentives" and was to have been coauthored with Jilleen Westbrook who unfortunately was unable to find time to work on this project.

Abstract

The Political Economy of External Discipline:
Constraint Versus Incentive Effects
of Capital Mobility and Exchange Rate Pegs

Thomas D. Willett

This paper argues that while sources of potential discipline over domestic macro economic policies such as pegged exchange rates, high capital mobility, and IMF policy conditionality are commonly viewed as constraints, it is usually more productive to view them as influencing incentive structures in a world of multiple relevant actors. From this perspective, pegged, as opposed to genuinely fixed exchange rates, are typically not an adequate substitute for domestic discipline enhancing measures. The micro level political economy analysis presented suggests serious limits to the effectiveness of external strategies as sources of discipline. Indeed, their effects can sometimes be perverse. For example, high capital mobility under fixed exchange rates can reduce short run discipline over fiscal policy and impede the ability of an independent central bank to counteract political business cycles in fiscal policy.

The analysis highlights the problems of attempting to use commitment devices with asymmetric time profiles to overcome problems generated by the asymmetric short run effects of discretionary monetary and fiscal policies. In particular exchange rate pegging gives front loaded benefits and delayed costs. This makes for a particularly inefficient strategy for trying to avoid domestic macro economic time inconsistency problems. Where short time horizons greatly discount the prospective future costs of a currency crisis, the political incentives generated by pegged rates often fail to provide sufficient monetary and fiscal restraint to avoid such crises. They also tend to discourage the prompt adjustment of disequilibrium exchange rates. As a consequence, exit from a pegged regime is often delayed too long and currency crises result. Thus the political incentive structures generated by exchange rate pegging can be as great a source of difficulty for the smooth operation of intermediate exchange rate regimes as are the economic forces of high capital mobility stressed by many economists.

The overall thrust of this paper is to suggest that external sources of discipline over macroeconomic policies are often weak and sometimes perverse. For many, and perhaps most countries, the primary focus for discipline should be internal.

Key Words: political economy, capital mobility, exchange rates, discipline

1. Introduction

There has been considerable interest in the IPE and economic policy literature on the role of external constraints, especially pegged exchange rates, international capital mobility, and the policy conditionality of the IMF as sources of discipline over domestic monetary and fiscal policies. Discipline arguments for fixed exchange rate regimes such as the gold standard have a long history, but only recently have they been given a strong analytic foundation in the analysis of time inconsistency and political business cycles.[1] These literatures point to mechanisms which generate incentives for governments to engage in policies which bring short term economic and political benefits at the cost of longer term economic instability. As a consequence, if the political process operates with a relatively short time horizon, this incentive structure is likely to generate an inflationary bias and excessive instability. Learning by the public should dampen those incentives, as is emphasized in the rational expectations literature, but the public choice concept of rational ignorance suggests strong limits on the speed and power of this learning process as far as the median voter is concerned.[2]

As a consequence of the combination of these theoretical developments and the confirming evidence of the inflationary excesses of the 1970s, considerable support developed in international organizations such as the IMF and many national governments for the adoption of institutional mechanisms to restrain such tendencies. On the domestic front this has been reflected in a broad movement toward greater independence for central banks and considerable debate over some

[1] See, for example, the analysis and references in Drazen (2000), and Willett (1988).
[2] See Willett and Banaian (1988).

implementation of measures to limit fiscal deficits.[3] On the international side, there has been considerable interest in, and use of, fixed or pegged exchange rates as nominal anchors for the domestic price level and there has been considerable debate about the roles of IMF conditionality and international capital flows as sources of discipline or crises.[4]

While unfair to a number of individual authors, it is not jousting with strawmen to characterize a substantial portion of the recent literature on these topics as focusing almost exclusively on the role of external factors as constraints over domestic policy behavior. This paper will argue, however, that in many, if not most cases, this constraint view is misleading, and the focus instead should be placed on changes in incentive structures. The argument is similar in spirit to that of Bates et al. (1998) who suggest that "Institutions do not impose constraints; the order they provide emerges endogenously. Institutions rest upon credible promises, of either reward or punishment. They therefore can and should be analyzed as the equilibria of extensive form games" (pg. 5).

A formal game theoretic analysis will not be presented, but the importance of the approach suggested in Bates et al. will, I hope, be amply illustrated. Far too often in the analysis of issues such as the effects of the European Monetary System on disinflation, analysts have taken formal models of credible commitment techniques and then applied them without qualification to situations where the commitment mechanisms in question were far from fully credible.[5] In its initial stages the European Monetary System was not a system of fixed exchange rates as it was often modeled and nominal anchor considerations were not paramount. Indeed, the EMS was

[3] Probably the best known fiscal limitation is the regional one adopted in the Mastricht Treaty which set the stage for European Monetary Union and the subsequent Growth and Stability Pact. For a political economy perspective and references to the debate see Willett (1999).

[4] On the debate about the IMF see the discussion and references in Willett (2001). On capital mobility see Willett (2000a) and on the use of exchange rates as nominal anchors see Westbrook and Willett (1999) and Willett (1998).

specifically designed to avoid the excessive stickiness of the adjustably pegged exchange rates of the Bretton Woods system which contributed so much to the breakdown of its exchange rate regime in the early 1970s. In its early days, exchange rate pegs in the European Monetary System were changed quite frequently, and they were intended to be. It was only in the mid 1980s that parity adjustments became strongly discouraged. As a consequence it is not surprising that the initial empirical studies generally failed to find evidence of the credibility effects posited in the theatrical models.[6] Indeed, had such effects been found, it would have been quite disturbing for economic theory.

One lesson of this experience is the importance of paying careful attention to the relevant institutional facts (details in this context would not be an accurate description). Moreover, the problem is not just that the external constraint may be less than fully effective. As will be discussed in section 3 below, "constraints" that are less than fully binding can influence incentive structures in ways that can increase rather than reduce the problems of time inconsistency. The asymmetric time profile of the effects of depreciation can create strong incentives to delay necessary exchange rate adjustments, contributing to the crisis prone nature of intermediate systems. With respect to exchange rates, the perverse effect on incentives structures turned out to be only a minor problem for the European Monetary System in terms of generating inflation, but for a number of developing and emerging market economies it has been a major one. They help explain the hyperinflation that accompanied the dissolution of the Soviet Union and the currency crises that resulted from the efforts at exchange-rate based stabilization during the 1990s in countries such as Brazil, Mexico, and Turkey, as well as the crises in the European Monetary System in 1992 and 1993. Careful attention to micro analytic considerations and institutional

[5] See Westbrook and Willett (1999).

structures also allows us to see that while high capital mobility is likely to increase discipline over monetary policy, it can in some instances reduce short run discipline over fiscal policy, as can even genuinely fixed exchange rates.

Differences in view about the degree to which institutional arrangements are binding constraints also has an importance influence on whether to view alternative commitment devices as complements or substitutes. For example, several recent papers have compared fixed exchange rates and central bank independence as alternative means of enforcing discipline.[7] It will be argued in this paper, however, that where exchange rates are pegged rather than being permanently fixed then the use of exchange rates as nominal anchors is likely to be more effective if the exchange rate regime is managed by an independent central bank, i.e. in this context, central bank independence and exchange rate anchors are complements rather than substitutes. Such considerations also apply to the argument that the fiscal limitations imposed by the European Growth and Stability Pact were redundant since the European central bank was independent. This argument is correct, however, only if central bank independence is quite effective, an assumption that is quite unlikely to hold.[8]

With respect to the IMF, there is a widespread view, especially in developing countries and those on the left in the industrial countries, that the Fund commonly imposes excessively harsh discipline on its borrowers. This view sees the IMF as extremely powerful, in effect imposing policy constraints on weak governments through its policy conditionality. The right, however, has a very different view. They tend to see the IMF as having little enforcement power and little oversight from its principal shareholders. They perceive an unholy alliance between IMF officials and borrowing governments under which money is loaned under conditionality programs, but

[6] See the analysis and references in Westbrook (1999).
[7] See Broz (2000), Clark (1999), Hallerberg (2001), and Keefer and Stasavage (2001).

neither side expects the conditions to be enforced. As a consequence of this incentive structure, critics from the right often see the net result of the IMF programs to be the weakening rather than strengthening of policy adjustments. Thus both the right and the left can join in criticizing the IMF, but for exactly opposite reasons – the right seeing it as retarding adjustment and the left seeing it as forcing too much. Serious researchers find that neither of these extreme views fully fits the facts and there is a good deal of disagreement about the relative weight of these opposing considerations.[9] The point here, however, is the importance of whether or not external constraints are strongly binding.[10]

It will be shown in section 2 that while fixed exchange rate will increase the costs of generating political business cycles, the incentive for such behavior will not always be eliminated. Nor will fixed exchange rates and high capital mobility eliminate the ability of governments to generate such cycles. Indeed, the combination of these two "constraints" can in fact undermine the ability of an independent central bank to keep governments from using fiscal policy to generate such cycles.

In section 3, the effects of soft pegs and flexible exchange rates are considered. It is argued that while providing less discipline than true fixed rates, flexible rates may often provide more discipline than soft pegs. Indeed, it seems likely that the use of adjustable pegs would maximize a government's ability to generate successful political business cycle. Section 4 discusses the importance of different domestic political economy models, especially distinguishing between the pure opturnistic governments that are featured most commonly in formal models and governments

[8] See Willett (1999)
[9] See, for example, Bird (1996), Killick et al (1998), and Ul Haque and Khan (2000).

who would like to pursue stable policies but are hampered by political weakness. It is argued that exchange rate pegs and IMF conditionality have much greater scope to be successful in the latter type of situation.

Section 5 focuses in more detail on the political economy problems involved in exchange rate-based stabilization. While pegging is often advocated to overcome the time inconsistency problems generated by the time asymmetries in the effects of changes in domestic macroeconomic policies, the adjustment of exchange rates also presents serious time asymmetry problems. With pegging, the benefits tend to come early and the costs later, while with abandoning a peg (or allowing it to depreciate more rapidly) the costs tend to come first and the benefits later. This makes temporary as opposed to permanent pegs a poor commitment technology for attempting to overcome domestic time inconsistency problems. This helps explain why so many efforts to use exchange rates as nominal anchors have ended in currency crashes and why it is so difficult to run intermediate exchange rate regimes in a stable manner. Section 6 concludes.

2. Fixed Rates, Capital Mobility, Macroeconomic Discipline, and Political Business Cycles

To begin it may be useful to offer a brief review of some of the basic economic factors that constitute the economic environment or set of constraints under which our political analysis must operate. These represent physical constraints on the game being played. In the simple guns and butter example of introductory economics texts, they would represent the production possibility curve or in a macro economics example, the slopes and positions of the short run and long run

[10] Of course, there are strong differences of view on this issue in the international relations literature, with idealists seeing international treaties and organizations as being highly effective while realists tend to view them as being of minor consequence at best. A promising intermediate approach is taken by the neo liberal institutionalists who tend to assume that international agreements are neither zero nor one hundred percent effective.

inflation - unemployment trade offs (Phillips' curves). The objectives or preferences of actors would be reflected in such analysis by indifference curves, which would be aggregated with differing weights depending on the political process. Equilibrium is found at the intersection of the aggregate indifference and production possibility curves. This is the unconstrained outcome, i.e., it is constrained only by physical realities. If this yields an inflation rate that is deemed to be "too high" in some social sense[11], then the first best solution would be to revise the operation of the political aggregation process that leads to the biased outcome. This would cause a shift in the aggregate indifference curve. When that is not feasible then there is a second best case for considering the adoption of an institutional constraint in hopes of promoting a better outcome. Using a commitment technology to tie one's hand can then lead to an increase in welfare.[12] Unless explicitly identified as economic, it is in this institutional sense that the term constraint will be used throughout this paper.

The basic framework for our analysis of the relevant economic relationships is the Mundell-Fleming model. While it has been fancied up in a number of useful ways over the years and is inappropriate for dealing with some important issues (such as stock-flow relationships, farsighted inter-temporal optimization, and speculative expectations) it remains the workhorse of international monetary analysis.[13] It stresses how the choice of exchange rate regimes and the degree of international capital mobility interact to influence the effectiveness of domestic monetary and fiscal policy. Despite the many qualifications added by theoretical improvements in the model, some of the most important conclusions of the original model remain in tact. Under fixed exchange rates

[11] An influential exposition of how short-time horizons and the difference between short run and long run inflation-unemployment tradeoffs can give rise to problems of time inconsistency and result in excessive inflation is given by Barro and Gordon (1983a, 1983b).
[12] See Giavazzi and Pagano (1988).
[13] See, for example, Krugman[1995]. A basic exposition of the Mundell-Flemming model can be found in almost any international economics text. A nice exposition is also given in Milner [1997].

high capital mobility reduces the effects of monetary policy on domestic demand, while under flexible rates the strength of monetary policy is increased. Thus we should not make broad generalizations such as increases in globalization always undercuts national autonomy.

Likewise while high capital mobility increases the strength of fiscal policy under fixed rates, it reduces it under flexible rates (because capital inflows cause currency appreciation and reduce the trade balance). Indeed by providing lower cost financing, high capital mobility under fixed exchange rates can reduce short run discipline over fiscal policy (see Andrews and Willett [1997] and Willett [2000a]). Thus, as Clark et al. (1998) note, the stark implication of the Mundell Fleming model is that governments cannot be kept by international market forces from generating political business cycles. Under fixed exchange rates they could use fiscal policy and under flexible rates they could use monetary policy.[14]

One of the oversimplifications of the Mundell-Fleming analysis is that monetary and fiscal policy can be treated as completely independent policy instruments. Thus Clark et al. express skepticism that with an independent central bank, governments could run an effective political business cycle policy under fixed rates with fiscal policy alone. Indeed in a closed economy with a steep LM curve, they are exactly right.[15] However, with perfect (or very high) capital mobility

---

[14] On how open economy considerations affect the incentive of governments to generate political cycles see Willett and Mullen [1982].

[15] The IS curve represents the combination of income and interest rates that leads to equilibrium in the real economy. The LM curve reflects the locus of points of equilibrium in the money market. A steep LM curve implies that an expansionary fiscal policy will lead primarily to an increase in interest rates and crowding out of investment, leaving little increase in aggregate demand. This corresponds to the impotency of fiscal policy argued by monetarists such as Milton Friedman. The new classical economists stress another channel for fiscal policy impotence. Under the strict assumptions of Ricardian equivalence, farsighted consumer-taxpayers desiring to smooth their consumption stream will increase savings and shift back in the IS curve. The Mundell-Flemming model points to a third mechanism. Under flexible exchange rates and high capital mobility, the fiscal deficit causes capital inflows and currency appreciation, which in turn worsens the trade balance, offsetting the initial expansion effects. This gives rise to the twin deficits. For the first and third mechanisms to operate it is crucial that the fiscal expansion not be met with monetary accommodation.

under fixed rates, the central bank cannot run an independent monetary policy. Any attempt to set interest rates above or below world levels would lead to massive capital flows which would in turn force domestic interest rates back to world levels. Expansionary fiscal policy (a shift out of the IS curve) would induce its own financing through capital inflows and consequent expansion of the domestic money supply. Thus while both fixed exchange rates and high capital mobility are often considered to be sources of domestic discipline, they can combine to nullify the ability of an independent central bank to keep politicians from generating a political business cycle.[16]

When forward looking expectations and price adjustments are added to the model, then concern about inflation and excessive levels of government debt could lead to immediate private sector sanctioning of the deficit through increased inflation and risk premia in interest rates. How well markets actually do this is a matter of considerable importance about which there is considerable disagreement. The available evidence strongly suggests that the real world lies somewhere between the short sighted Keynenian version of the original Mundell-Fleming analysis and the farsighted new classical rational expectations models currently popular among academic economists.[17] We get important insights from both types of analysis and neither is an adequate depiction of reality for all purposes. Obviously, the comparative explanatory power of these approaches is a crucial research issue.

[16] With moderate capital mobility, an independent central bank could sterilize the capital inflow, at least in the short run, and avoid monetary expansion or indeed could even contract the money supply to penalize the fiscal authorities for bad behavior. With very high capital mobility, however, sterilization is not possible and discipline would not be exerted.

[17] See the analysis and references in Willett (2000a). While the new classical rational expectations models are much more elegant, the older Mundell-Fleming analysis is much better for illustrating the important difference between substantial and perfect capital mobility.

Consider the proposition that with fixed exchange rates one cannot follow an independent national monetary policy.[18] With perfect capital mobility this is unambiguously true. However with moderate or even substantial, but less than perfect, capital mobility an important distinction must be made between short run and long run independence. Loss of long run independence is generated by the requirement of long term balance of payments equilibrium, i.e., the condition that one cannot indefinitely expand or contract your international reserves.

Note that if a country's currency is held by others as international reserves without convertibility into some more basic reserve asset then a fixed exchange rate by itself is not a constraint. In other words the exchange rate peg between the Austrian schilling and the German mark provided discipline for Austria but not Germany. Thus it is important to specify the monetary arrangements that accompany an exchange rate regime. Countries that maintained a pegged rate against the Russian ruble after the breakup of the Soviet Union were constrained in the rate of inflation they could run, but this constraint was for a while in a quadruple digit range. Indeed in an early stage the fixed rates of the FSU's ruble zone were an incredible engine of inflation. The mutual acceptability of each other's ruble emersions with no centralized control generated strong incentives for excessive money creation which were duly taken advantage of with disastrous results (see Banaian and Zhukov, 1995).

Now let us return to the case of a smaller country with its exchange rate fixed to a larger stable partner. Unless capital mobility is extremely high, the small country will still have some

[18] Of course it is impossible to assure that any exchange rate is truly permanently fixed. Countries did go off of the gold standard, the Soviet Union collapsed and countries such as Czechoslovakia and Yugoslavia have broken in two, with new currencies being created. In each case, however, very extreme circumstances were present. Thus in each case the probability of exchange rates being altered was for a long time extremely low. While technically the degree of fixity of an exchange rate is a continuum, it seems reasonable to refer to permanently or genuinely fixed exchange rates of institutional arrangements where only catastrophic developments are likely to give rise to a change.

short run monetary policy independence. The amount of this independence will be greater, the lower is the degree of capital mobility and the less is its openness to international trade. Even with the tremendous increase in international capital mobility in recent years many countries, including middle-sized emerging markets like Korea and Thailand, have considerable scope for short run sterilization and independent monetary expansion.[19]

In such cases short run monetary discipline comes from incentives, not binding constraints. It is on the knowledge that the long-term constraint must be met that discipline over short run behavior must rely and this may not always be sufficient. A genuinely fixed exchange rate wields its shadow of the future in the form of a high probability that any current rapid monetary expansion will have to be reversed later in order to restore long run balance of payments equilibrium. This will increase the likely future costs of a current expansion. How powerfully this would discourage pre-election expansion would depend on the expected future costs relative to current benefits, the time rate of discount of the relevant decision makers, and the probability that the future costs will actually have to be borne. The latter is lowered by the possibility that the decision makers will no longer be in power when the bill comes due (and hence will likely face a smaller share of the costs). This probability is also lower; the greater is the degree of noise (in the environment if there is a good deal of uncertainty about future balance of payments developments then policy makers will see a greater subjective probability that give rise to that expansionary policy might not have to be reversed after all in the future).

Depending on the balance of these factors, the long-term constraint may or may not provide enough incentives for short-term discipline and the avoidance of political business cycle behavior. Thus even under a genuinely fixed exchange rate, it may not be redundant to make the central bank

[19] See the analysis and references in Willett, Keil, and Ahn (forthcoming).

institutionally independent of political pressures in order to reduce the likelihood of unstable short run behavior. As has been stressed in the literature on monetary constitutions, for a constraint system to work well, the costs of actually hitting the constraint need to caste their shadow over decisions made within the constraint, overwise dynamic instability is likely to result.[20] In this context, it is likely that a central bank that was highly sensitive to short term political pressures would tend to give insufficient weight to the shadow of the constraint.

Central bank independence would be redundant where an automatic rule to not sterilize international reserve flows is followed. Under these so-called "rules of the game" of the gold standard, non-sterilization would put domestic monetary policy on automatic pilot. In fact, however, these "rules" were seldom followed in the short run. The gold standard was in practice more managed than automatic, but the greater wage and price flexibility and lower degree of perceived government responsibility for providing full employment typically gave rise to less political pressure for short run manipulation of monetary policy than has occurred in the post war period.[21] Probably the closest to fully automatic monetary systems have been the stronger forms of currency boards adopted by a number of smaller countries.[22] Of course, as discussed above, sufficiently high capital mobility would likewise make sterilization impossible under any type of

[20] See the analysis and references in Willett (1987).
[21] See Eichengreen (1998). Of course, the William Jennings Byran cross of presidential gold campaign reminds us that monetary policy was not entirely apolitical even during the gold standard.
[22] It should be noted, however, that there is a good deal of variation among the actual institutional arrangements among countries labeled as having currency boards. Then for example, there is greater scope for an automatic monetary policy in Hong Kong than in Estonia. See, for example, Dubauskas et al. (1999).

fixed exchange rate regime, but few, if any, countries have faced such a high degree of capital mobility.[23]

3. From Fixed to Pegged and Flexible Exchange Rates

As one moves from a permanently fixed to an adjustably pegged exchange rate regime, the balance of incentives tips further away from short term discipline. Indeed, it seems likely that adjustably pegged exchange rate regimes maximize the incentives for political business cycle behavior.[24] Granted there will still be costs to devaluation. Except for very small open economies, however, these costs are likely to be less than for the domestic deflation required under genuinely fixed rates. Thus the expected future costs of current expansionary policies are reduced. It is not surprising that many developing countries have displayed election related patterns in their balance of payments and exchange rate policies. Mexico is a prime example.

It is relatively straightforward that a pegged exchange rate will yield less discipline and greater incentives for political business cycle behavior than permanently fixed rates. But pegged

[23] The concept of financial capital mobility relevant in this context is the quantity of capital that flows into or out of a country per unit change in expected return (the interest rate plus any expected change in the exchange rate). Unfortunately, this is a difficult concept to measure and few direct estimates are available. The closest variable for which a reasonable number of recent estimates are available are offset coefficients, the proportion of an increase in the domestic monetary base that flows out abroad. The higher the offset coefficient, which runs from 0 to 1, the higher is financial capital mobility. While they cannot be converted directly into estimates of the elasticity of capital flows, financial capital mobility will typically be positively related with the extent to which uncovered nominal interest rate parity holds, i.e. the extent to which like domestic interest rate equals the foreign interest rate plus the expected change in the exchange rate. This has become a popular method of estimating capital mobility but the standard application for this approach contains an upward bias to the extent that domestic interest rate and exchange rate expectations. See Willett, Keil and Ahn (forthcoming). This suggests that estimates of the extent to which real interest rate parity holds may be more appropriate, although there also may contain biases, according to the degree to which purchasing power parity holds. While often used, the covered interest differential, the nominal interest differential adjusted for the forward premium or discount, is definitely an appropriate measure of the degree of capital mobility. The failure of covered interest parity to hold is a valid indicator that perfect capital mobility does not hold, but a finding that of covered interest parity holds does not imply that capital mobility is high. The relation of the forward rate to interest parity will depend on the relative elasticity for the covered arbitrage and speculative schedules and it is possible for an increase in the elasticity of speculative funds to narrow the covered internal differential while increasing the degree of capital mobility (again see Willett, Keil, and Ahn [forthcoming]).

[24] See Willett and Mullen (1982). See also Rogoff (1985).

rate regimes may also provide less discipline than flexible rate systems. Neither provides a long run constraint, thus the question comes down to their comparative effects on incentives.

While the economic effects would be largely the same, the political costs of a devaluation under pegged rates is likely to be considerably higher than for a similar sized depreciation under flexible exchange rates. This cuts in favor of greater discipline under pegged rates. Against this must be balanced any possible differences in short term benefits under the two types of regimes and any differences in early warning signals that may be give to forward looking agents.

The traditional political business cycle model is driven by the differential price and quantity effects from unanticipated macro economic expansions. In the typical economy characterized by a considerable degree of short run wage and price stickiness, quantities tend to respond more quickly than prices. This gives rise to a non-vertical Phillips curve in the short run. Its slope will be flatter, the greater is the degree of wage and price stickiness and the less expected are changes in policy.[25] The incentives to play the traditional PBC game are a direct function of the slope of the short run curve. The flatter the curve, the greater are the initial quantity relative to price effects, and hence the greater is the incentive to play the game. With a perfectly vertical short run curve (as in the strongest forms of the new classical rational expectations models) this incentive disappears entirely. From this perspective, flexible rates will reduce the short term benefits from a monetary expansion induced political business cycle by leading to immediate depreciation. This will speed up the price effects and make the short run Phillips curve steeper. This effect will typically be greater, the higher is the degree of international capital mobility since this will increase the amount

[25] Strictly speaking an anticipated change in prices would cause a shift in the short run Phillips curve but the effect would be the same as if the curve were steeper. Hence, the new classical argument that a credible commitment to monetary tightening could reduce inflation without need for a recession. In practice, however, it has proven extremely difficult to make such commitments immediately fully credible even with the use of strong institutional mechanisms such as the adoption of currency boards. See Dubaskas et al (1999) and Willett (1998).

of short run depreciation from a given amount of monetary expansion. Thus unless capital mobility is high enough to prevent the expansion of the domestic money supply under pegged rates, flexible rates would score better on this aspect of discipline. By the same token, a government wanting to play the PBC game would prefer pegged rates.[26]

When we turn to fiscally induced expansion, this strong advantage of flexible rates no longer holds. Fiscal expansion would induce capital inflows which would limit the depreciation or, where capital mobility were sufficiently high, would lead to appreciation. Thus neither pegged nor flexible exchange rates are likely to provide effective discipline against opportunistic fiscal expansion as long as a country still has considerable borrowing capacity.[27] Increases in international capital mobility could thus act to reduce rather than increase short term discipline. It can be argued that the Italian experience during the EMS shows that this possibility is not just hypothetical.[28]

This analysis suggests an important qualification to Romer (1993)' s argument that greater openness will reduce the incentives for surprise monetary expansions. Romer's analysis in effect assumes flexible exchange rates. As we discussed, with flexible rates depreciation would speed up the price effects of a monetary expansion and this effect would be greater, the more open is the economy. Thus openness would decrease the incentives for monetary expansion. However, with pegged exchange rates, we would expect the opposite to occur. The more open the economy, the greater the proportion of an increase in aggregate demand that would be spent on imports rather than domestic goods. Since any one country is only a fraction of the world economy, it would face

[26] This would hold whether monetary or fiscal policy were used.
[27] At very high levels of debt to GDP ratio, budget deficits are much more difficult to finance.
[28] See Andrews and Willett [1997]. This paper also suggests that this may help explain Garrett's [1998] [1995] failure to find that capital mobility has severely constrained the welfare state as many had posited.

a flatter supply curve for imports than for domestic goods and as a consequence would have a flatter short run Phillips curve, the more open the economy. Thus just as the Mundell-Flemming model shows that the effects of the degree of capital mobility on the strength of domestic monetary and fiscal policy will depend crucially on the nature of the exchange-rate regime in operation, so also the effects of trade openness on the incentives for monetary expansion depend on the exchange-rate regime.

Another relevant issue is whether changes in international reserves or changes in exchange rates send better signals to the public about inappropriate economic expansion. There has been considerable difference of opinion on this issue among economists, but little systematic study. My hunch is that the relationship is discontinuous, with moderate exchange rate changes sending much stronger signals than moderate reserve losses. On the other hand, if reserve losses become large enough to generate major speculative attacks under the pegged rate, then this may generate greater visibility than the comparable depreciation under a flexible rate. However, I am not aware of any systematic research on the issue.[29]

It also does not seem clear whether governments have greater incentives to defend the currency under pegged or flexible rates once a crisis is underway. Both can be used to try to rally domestic support for more disciplined policies. In the recent Brazilian case, it appears that external discipline arguments became more effective after a currency crisis forced abandonment of the peg. This may also have been the case for Russia. On the other hand, the Mitterand government

[29] Advocates of the use of exchange rates as nominal anchors often argue that exchange rates are easier for the general publics to monitor than the money supply. While likely true, this seems relevant only when depreciation is forced under a pegged rate regime. As an early warning system prior to crises, the relevant issue would rather seem to be monitoring money supply changes versus changes in international reserves. Which of these would seem likely to be more visible is far from obvious. A full political economy treatment of this issue would also consider the differences in monitoring by different types of agents. Today an increasing number of economists are advocating inflation targeting as generally superior to both monetary and exchange rate targeting. See, for example, Mishkin and Posen (1997)

appeared to be extremely successful in using its defense of the franc as a strategy for building support for tighter domestic macro economic policies. There are conflicting views, however, about whether the government itself felt discipline from its exchange rate commitment, or whether it just used such arguments as a way of gaining support for policies which it felt were desirable on other grounds.[30] In either event it seems likely that the strong linkage of the exchange rate commitment to the broader prospect of European integration was an important component of exchange rate discipline in the French case.

4. Some Implications of Different Models of Government Objectives and the Domestic Political Economy

Most formal analysis focuses on the incentives facing opportunistic unitary governments under different exchange rate regimes and conditions of capital mobility. Also of importance, however, is the case of well meaning governments who would like to follow disciplined policies but lack the political strength to always do so. Of course most actual governments are likely to reflect elements of both pure types with the relative weights shifting more toward the former as elections near.

While opportunistic behavior is modeled much more frequently, the case of well meaning but weak governments may well have as much or more explanatory power.[31] It should receive a good deal more attention in formal analysis since the two types of behavior sometimes have quite different implications. An example is provided by Willett and Banaian (1996). An increase in international currency substitution will lower the rates of inflation for both welfare maximizing and revenue maximizing governments. On the other hand, for a weak government that does not have

[30] See the analysis and references in Andrews and Willett (1997).

the political capability to either cut government spending or raise tax revenues directly, an increase in currency mobilization may increase the resulting rate of inflation (as it takes more inflation to raise a given amount of real revenues through the inflation tax).

As our previous analysis has suggested, an adjustable peg appears to be a weak reed with which to try to constrain opportunistic government behavior. It may hold more promise for well meaning governments who are seeking to rally political support for their policies. This will only be successful, however, if the government follows an active strategy of using the need to defend the currency to build an effective domestic coalition in support of the necessary monetary and fiscal discipline. The competence of the government in pursuing such coalition building, the salience of exchange rate defense, and the size of the swing group in the legislature that can be potentially influenced will all vary from case to case.[32] In general, from the theory of optimum currency areas, we would expect peg defenses to be more salient for small open economies, than for large, relatively closed ones.[33] Factors such as linkage to European integration in the case of France or to past experiences where depreciation had appeared to be highly inflationary such as Brazil and Mexico are likely to increase the salience of defending an exchange rate peg.

A strong critic of exchange rate pegging might argue that there is nothing to the discipline argument because if a well-meaning government has strong political support the discipline from the peg is not needed, while if support is quite weak, as in the recent Russian example, then the discipline will be insufficient. This misses the possibility, however, of intermediate levels of

---

[31] See Willett (1988).

[32] Note that the issue concerns perceptions not necessarily reality. Confusion about causation in periods of inflationary pressure often leads to popular perceptions than depreciation is responsible for much more inflation than is actually the case. For example, such a perception which did not accord with most of the scientific evidence was one of the important contributions to the adoption of the strong franc policy by the Mitterand government. See Andrews and Willett (1997).

[33] See Al-Mahubi and Willett (1994), and Willett (1998)

support such that defense of the peg can be used to swing enough votes (or political clout) in favor of unpleasant but desirable monetary and fiscal restraint.

These are also the circumstances in which the policy conditionality of IMF programs can be effective. Contrary to popular criticisms, seldom, if ever, does the IMF unilaterally impose conditions on a country. Where IMF programs work, it is usually through a combination of carrots and sticks that are able to strengthen the hand of those in government who are trying to implement discipline oriented policies. The Fund appears to be increasing the emphasis that it places on developing national government "ownership" of its programs. It would be of considerable value to have a great deal of systematic comparative political economy analysis of the conditions under which both exchange rate pegging and IMF programs have enjoyed different degrees of success or failure in generating greater discipline. Such research would be of obvious importance to scholars of international and comparative political economy and should also be of considerable practical importance for national officials and the IMF by helping to shed light on such issues as the design of policy packages to maximize political support.[34]

The relevance of such analysis is particularly important because the issue is not just the degree of effectiveness of the strategies, but also whether they will have perverse effects. Exchange rate pegs that fail often lead to much worse economic situations. This is a case where to try and fail may be much worse than not to have tried at all. Thus pegging should be attempted only where it has a reasonably high chance of being successful. Furthermore, as will be discussed in the following section, temporary pegging can create incentives that increase the odds of failure.

[34] For an argument that the IMF needs to pay more attention to political economy considerations see Willett (2000b).

Of course in our standard credibility models the high cost of failure should increase the credibility of an exchange rate commitment. For political economy purposes, however, the nature and distribution of the costs of failure are highly relevant. While there is usually a positive correlation between economic and political costs, the mapping between them is far from one to one. It is widely assumed in the literature on exchange rates as nominal anchors that the political costs of devaluation are quite high, but this conventional wisdom has little systematic documentation.[35]

From this perspective the prospective electoral costs to heads of state, party leaders, and members of the legislature are likely to be particularly relevant. A multitude of political parties and a low degree of cohesion within parties is likely to lead not only to a tendency to overspend[36], but also to problems with the effectiveness of using currency defense as a method of imposing discipline. Such considerations will of course also increase the difficulties of developing sufficiently broad ownership for IMF policy conditionality to be effective.

5. An Application to Exchange Rate Based Stabilization Policies, the Unstable Middle, and the Political Economy of Exit

The rash of international financial crises during the 1990s has provided a dramatic illustration of the inconsistency of high capital mobility with traditional adjustable peg exchange rate regimes as predicted by international monetary theory, (the "unholy trinity"). The technical economic problems of running intermediate (between fixed and flexible) exchange rate regimes are

[35] This is obviously an important area for further research. In undertaking such work it will be important to consider effects on a broad set of relevant actors. In one of the few comparative studies relevant to this issue, Richard Cooper (1971?) found that finance ministers faced a significantly higher probability of losing their jobs if they presided over a devaluation. This may not provide much of a discipline effect, however, since finance ministers are usually in favor of more prudent policies anyway.

[36] There is a growing literature on how the types of budgeting procedures, political institutions, and configurations of political power that influence fiscal outcomes. See, for example, Alesina, Cohen, and Roubini (1991), Hallerberg and Von Hagen (1997) and Von Hagen (1998).

formidable, but John Williamson (1996) points to the experiences of countries such as Chile, Colombia, and Israel as examples that in the form of crawling bands, intermediate exchange rate regimes are still feasible in a world of high capital mobility.[37] The recent crises in Brazil, Mexico, Russia, and Turkey, however, sadly illustrate the limits to the discipline that such crawling band regimes can provide and their susceptibility to generating crisis. There are strong political economy reasons for thinking that these crises were not just bad luck, but rather the result of the incentive structure generated by the exchange rate regime (combined with the types of bad luck that will occur fairly commonly). Intermediate regimes that have been used to fight inflation under exchange rate based stabilization policies appear to have been particularly prone to crisis.[38]

This poor track record of the use of exchange rates as nominal anchors should be quite embarrassing to the many academic economists and policy officials who advocated such strategies. A series of theoretical arguments about time inconsistency problems and the use of fixed exchange rates as commitment devices to overcome inflationary biases and the successful disinflation in Europe during the 1970s under the European Monetary System resulted in substantial expert support for the use of exchange rates as nominal anchors. Advocacy for such currency strategies spread from academic research to recommendations by IMF and adoption by a number of countries

One major reason for the poor record of this approach is that many advocates of these strategies failed to clearly distinguish between hard pegs and temporary pegs. See Westbrook and Willett (1999) and Willett (1998). The success rate for the former, at least in terms of generating low inflation and avoiding currency crisis, has been much higher for the former than for the latter.

---

[37] See also the discussions in Eichengreen (2001), Fischer (2001), and Glick (2000).
[38] See Martin, Westbrook, and Willett (1999)

The mixed record of exchange rate based stabilization efforts lead some prominent economists such as Jeffrey Sachs (1997)(1996) to recommend temporary pegs to aid domestic stabilization. The problem of exiting from such temporary pegs before severe crises occur is quite serious, however. The economics of timely exits is well understood (see Eichengreen et al [1998]), but the politics is not. Thus where the political process operates with a short-time horizon such as before elections, there can be strong incentives to attempt to delay devaluation or reduce the rate of depreciation. The costs of crises can be considerable in political as well as economic terms. This gives governments incentives to avoid exchange rate overvaluation, just as the costs of future deflation will reduce the incentives for political business cycle expansions. Such future costs may be heavily discounted, at times however, especially where current policy actions that bring short run benefits are seen only as increasing the odds of future costs, not making them inevitable. The frequency of costly currency crises suggests that the shadow of future costs is often insufficient to avoid seriously overvalued currencies.

Of course, it is not impossible to exit from intermediate exchange rate regimes before crises are induced. The recent moves from crawling bands to flexible rates by Chile, Israel, and Poland demonstrate this possibility. To understand the conditions for such successful exits we will clearly need to focus on political as well as economic considerations, however. This will require a good deal of micro level domestic political economy analysis which investigate how alternative regimes influence the incentive structures of various domestic agents and their relative influence in the domestic political process.[39] For example, strong export interests may make it "easier " to operate intermediate exchange rate regimes without crisis, as they will push against exchange overvaluation. Urban service workers, on the other hand, are likely to fight depreciation. The

political weight of these groups will depend in part on the structure of the economy. For small open economies the export interests are likely to be more important. Other important considerations include the political connections of the groups, whether a government of the right or the left is in power, and the degree of institutional independence given to those making exchange rate policy – for example, is policy made by the government or delegated to an independent central bank and in the latter case, how effective is this independence in practice.

The problem is that with a temporary peg, whether constant or crawling, there is a time asymmetry in the effects of adjusting the parity under downward pressure. The initial effects of a discrete devaluation or rapid depreciation on inflation and the blow to prestige and/or credibly tend to show up quickly, while the benefits of improved trade balance, increasing output, and declining unemployment tend of show up with substantially longer lags. Where the political process operates with a short time horizon this gives an incentive to delay needed depreciations and results in a tendency for currencies to be overvalued and eventually crash. On the other hand, the initial effects of pegging are likely to be quite favorable. With this time profile skewed toward early benefits and delayed costs, it is easy to see how exchange rate based stabilization has proven to be quite popular with many national governments. It is quite ironic, however, that many disinterested advocates of such strategies have failed to recognize that with such a time profile of early benefits and later costs, soft as opposed to hard pegs cannot be expected to be a very effective way to overcome the time inconsistency problems generated by the early benefits and later costs of expansionary domestic policies and the initial costs and delayed benefits of contractionary policies. Indeed while a genuinely fixed rate would put an effective constraint on the inflationary bias resulting from the

[39] For recent analysis and references to the literature on the domestic political economy of exchange rate regimes see Frieden and Stein (2001) and Wise and Roett(2000).

time inconsistency problems of discretionary domestic macro policy a temporary peg could well increase rather than reduce this bias.

6. Concluding Remarks

With the exception of monetary policy for small open economies, exchange rate pegs seldom actually work as the credible constraints of the type frequently modeled in macro level political economy analysis. It will typically be more productive to view them as influencing incentive structures in a world of multiple relevant actors. From this perspective, pegging, as opposed to genuinely fixed exchange rates, is not a substitute for domestic discipline enhancing measures, but a complement.

The general thrust of such micro level political economy analysis is to suggest limits on the extent to which pegging strategies are likely to be useful as sources of discipline. A number of papers have touted the success of exchange rate based stabilization policies and the use of exchange rates as nominal anchors, but the supporting evidence offered is typically highly selective. More systematic study, however, finds that despite a number of quite visible successes, a substantial majority of such efforts end in failure.[40]

Our analysis highlights the problems of attempting to use commitment devices with asymmetric time profiles to overcome problems generated by the asymmetric short run effects of discretionary monetary and fiscal policies. Where short time horizons greatly discount future costs of an exchange rate crisis, the political incentives generated often fail to provide sufficient monetary and fiscal restraint to successfully defend the peg over the long term. They also tend to

[40] For analysis and references see Hamann (1999), Martin, Westbrook, and Willett (1999), Vegh (1992), and Willett (1998).

discourage the prompt adjustment of disequilibrium exchange rates. As a consequence, exit from a pegged regime is often delayed too long and currency crises result. Thus the political incentive structures generated by exchange rate pegging seem likely to be as great a source of difficulty for the smooth operation of intermediate exchange rate regimes as are the economic forces of high capital mobility stressed by many economists.

A great deal of political economy research is needed on the ways in which various types of exchange rate arrangements interact with domestic institutions and political configurations to promote discipline or crisis. This topic is another prime example of the scope for fruitful interaction not only between political and economic analysis, but also between the traditionally distinct fields of international and of comparative political economy.

While there is a great deal more to be learned, a few generalizations are already possible. One of the most important is the danger of confusing different degrees of institutional commitments to exchange rate pegs. Strong institutional commitments such as the adoption of currency board or of a common currency are quite different from less well specified commitments. Indeed, adjustable pegs may maximize the incentives for political business cycles. They may increase rather than reduce time inconsistency problems. The latter do sometimes work well, as in the cases of Austria, the Netherlands, and France, but such cases seem to be the exception. To understand the role of exchange rate pegging in promoting discipline or crisis we need to develop a more micro oriented political economy framework that focuses on the effects of pegging on the interests and influence of different sets of actors. It will be a difficult task to sort out the causal mechanisms at work in the cases of success. For example, conflicting views have been offered about whether the adoption of a currency board in Estonia was an important independent cause of fiscal discipline or whether both were the products of an underlying political commitment to stability. Even after extensive research

there will likely be cases which remain indeterminate. But this prospect should not deter us from trying to learn as much as we can.

Another important conclusion is that one should not analyze the case for exchange rate anchors independently of the traditional optimum currency area (OCA) analysis of the costs and benefits for alternatives exchange rate regimes. It is true that the actual process of currency union is dominated more by political than economic considerations, but OCA theory does have a good deal of explanatory power with respect to the degree of flexibility adopted in country's unilateral exchange rate arrangements.[41] While many of the OCA criteria are difficult to make operational, and empirical studies find conflicting results on the effects of some variables, the theoretical arguments that pegged rates have more favorable benefit-cost ratios for small open economies than for large relatively closed ones are quite strong and these factors do have substantial explanatory power with respect to countries' actual choices. Thus it should come as no surprise that successful cases of exchange rate anchors include many small economies such as Austria, Estonia, and the Netherlands. Argentina is not a good fit on the size and trade openness criteria of OCA theory, but its high level of dollarization made it a candidate on the currency substitution criterion. France is not a strong candidate on most OCA criteria (pattern of shocks is an exception) so one must look more for political explanations for success in this case. At the other end of the spectrum, the huge economies of Indonesia and Russia make them very poor candidates for the adoption of currency boards with which their governments flirted during 1998.

Another important consideration is that the degree of disciplining that exchange rate regimes can offer is distinctly limited. Thus such strategies should only be tried where the prospects for monetary and fiscal discipline are relatively good in the first place. This helps to

explain the success of disinflation policies under the European Monetary System. For example, while relatively undisciplined by European standards, even Italy had a strong basis of institutional and political support for stabilization efforts in comparison with many of the former members of the Soviet Union, including Russia. Developing some idea of the size of the likely zones of sufficient institutional and political responsiveness to discipline pressures from exchange rate arrangements is clearly an immensely important topic for analysis. Until more is known, however the high costs of failures suggest that the prescription of exchange rate anchoring should carry a strong warning label.

The disciplining effects of high capital mobility are also frequently found to be wanting. Seldom do capital flows operate as actual constraints over policy. Rather they need to be seen as primarily affecting the costs and benefits of various policy actions and hence influencing incentive structures. In some cases, high capital mobility can reduce fiscal discipline and in many cases a lack of farsightedness in the financial markets have failed to give early warning signals of policies going off track.

The limitations of capital markets and pegged exchange rates as sources of external discipline provide a strong justification for the IMF's programs of policy conditionality. These also seldom act as effective constraints over national policies. (See Bird (1996). The effects of IMF programs on the incentives for policy adjustment can run in both directions as perverse time asymmetries can play a role here as well. But that's the subject for another paper.

[41] See, for example, Bayoumi and Eichengreen (1998), and Poirson(2001).

The major policy conclusion of this paper is that external sources of discipline over macroeconomic policies are likely to often be weak and sometimes perverse. For many, and perhaps most countries, the primary focus of efforts to promote discipline should be internal.

References

(not yet complete)

Andrews, David, and Thomas D. Willett. 1997. "Financial Interdependence and the State: International Monetary Relations at Century's End." *International Organization* 51(Summer): 479-511.

Al-Marhubi, Fahim, and Thomas D. Willett. 1994. "Currency Policies for Inflation Control in the Formerly Centrally Planned Economies." *The World Economy*, Novermber: 795-815.

Alesina, Alberto, Gerald D. Cohen, and Nouriel Roubini. 1991. "Macroeconomic policy and elections in OECD democracies." NBER Working Paper No. 3830. Cambridge, Mass.: National Bureau of Economic Research, September.

Bates, Robert H., Avner Greif, Margaret Levi, Jean-Laurent Rosenthal, and Barry R. Weingast. 1998. *Analytic Narratives*. Princeton: Princeton University Press.

Banaian, King, and Eugenue Zhukov. 1995. "The Collapse of the Ruble Zone," in Thomas D. Willett et al., eds., *Establishing Monetary Stability in Emerging Market Economies*. Pp. 209-30. Boulder, Colo.:Westview Press.

Barro, Robert J., and David B. Gordon. 1983a. "A Positive Theory of Monetary Policy in a Natural Rate Model." *Journal of Political Economy*, August: 589-610.

_____. 1983b. "Rules, Discretion and Reputation in a Model of Monetary Policy." *Journal of Monetary Economics*, July: 101-21.

Bayoumi, Tamim, and Barry Eichengreen. 1998. "Exchange Rate Volatility and Intervention: Implications of the Theory of Optimum Currency Area." *Journal of International Economics* 45(2):191-209.

Bird, Graham. 1996. "The International Monetary Fund and Developing Countries: A Review of the Evidence and Policy Options. *International Organization* (summer): 477-511.

Broz, Lawrence J. 2000. "Political Institutions and the Choice of Monetary Policy Commitment Regimes." Paper prepared for delivery at the 2000 Annual Meeting of the American Political Science Association. August 31-September 3, 2000, Washington D.C.

Clark, William Roberts. 1999. "Competing and Complementary Explanations of Monetary Regime Choice." Paper prepared for presentation at the 1999 Annual Meeting of the American Political Science Association. September 2-5, 1999, Atlanta, Georgia.

Clark, William Roberts, and Usha Nair Reichert. 1998. "International and Domestic Constraints on Political Business Cycles in OECD Economies." *International Organization* 52(1):87-120.

Cooper, Richard (1971?) Princeton Essay

Drazen, Allan. 2000. *Political Economy in Macroeconomics*. Princeton: Princeton University Press.

Dubauskas, Gediminas, Clas Wihlborg, and Thomas D. Willett. "The Baltic States: Alternative Routes to Credibility," in Richard Sweeney, Clas Wihlborg, and Thomas D. Willett, eds., *Exchange Rate Policies for Emerging Markets*. Pp. 83-112. Boulder, CO: Westview Press.

Eichengreen, Barry. .1998. Globalizing Capital: *A History of the International Monetary System*. Princeton: Princeton University Press.

Eichengreen, Barry, Paul Masson, Hugh Bredenkamp, Barry Johnston, Javier Hamann, Estaban Jadresic and Inci Otke. 1998. Exit Strategies: Policy Options for Countries Seeking Greater Exchange Rate Flexibility. IMF Occasional Paper No. 168. Washington, D.C.: International Monetary Fund.

Fischer, Stanley. 2001. "Is the Bipolar View Correct?" Paper prepared for the 2001 American Economic Association meetings. Washington, D.C., International Monetary Fund, January 2001.

Frieden, Jeffrey, and Ernesto Stein, eds. 2001. *The Currency Game: Exchange Rate Politics in Latin America*. Washington, D.C.: Inter-American Development Bank.

Geoffrey, Garrett. 1998. *Partisan Politics in the Global Economy*. Cambridge: Cambridge University Press.

_____. 1995. "Trade, Capital Mobility and the Politics of Economic Policy." *International Organization* 49:657-87.

Giavazzi, Francesco, and Marco Pagano. 1988. "The Advantage of Tying One's Hands: EMS Discipline and Central Bank Credibility." *European Economic Review*, June: 1055-82.

Glick, Reuven (2000). "Fixed or Floating: Is It Still Possible to Manage in The Middle?" Paper prepared for the conference on "Financial Markets and Policies in East Asia", Australia National University, August.

Hallerberg, Mark. 2001. "Veto Players, and Monetary Commitment Technologies." Manuscripts. University of Pittsburgh. <available at http://www.pitt.edu/~hallerb/homeframes.html>.

Hallerberg, Mark, and Jurgen Von Hagen. 1997. "Electoral Institutions, Cabinet Negotiations, and Budget Deficits in the European Union. NBER Working Paper No. 6341. Cambridge, Mass.: National Bureau of Economic Research, December.

Hamann, A. Javier. 1999. "Exchange Rate Based Stabilization," IMF Working Paper 99/132.

Keefer, Philip, and David Stasavage. 2001. "Checks and Balances, Private Information, and the Credibility of Monetary Commitments." World Bank Working Paper No. 2542. Washington D.C.: World Bank, March.

Killick, Tony, Ramani Gunatilaka, and Ana Marr. 1998. *Aid and the Political Economy of Policy Change*. New York: Routledge.

Krugman, Paul. 1995. "What Do We Need to Know About the International Monetary System?" in Peter B. Kenen, ed., *Understanding Interdependence: the Macroeconomics of the Open Economy*. Pp. . Princeton: Princeton University Press.

Martin, Pamela, Jilleen Westbrook, and Thomas D. Willett. 1999. "Exchange Rates Based Stabilization Policy in Latin America," in Richard Sweeney, Clas Wihlborg, and Thomas D. Willett, eds., *Exchange Rate Policies for Emerging Markets*. Pp.141-64. Boulder, Colo.: Westview Press.

Milner, Helen. 1997. *Interests, Institutions, and Information: Domestic Politics and International Relations*, Princeton

Mishkin, Fredric, and Adam Rosen. 1997. "Inflation Targeting." *Economic Policy Review*, Federal Reserve Bank of New York, August 9-10.

Poirson, Helene. 2001. "How Do Countries Choose Their Exchange Rate Regime? IMF Woeking Paper/01/46

Rogoff, Kenneth. 1985. "Can International Monetary Policy Cooperation be Counterproductive?" *Journal of International Economics* XVIII: 199-217.

Romer, David. 1993. "Openness and Inflation: Theory and Evidence." *Quarterly Journal of Economics* CVIII (4): 869-903.

Sachs, Jeffrey. 1997. "An Overview of Stabilization Issues Facing Economies in Transition," in Wing Woo, Stephan Parker and Jeffrey Sach, eds., *Economies in Transition*. Pp. 243-56. Cambridge, Mass.: MIT Press.

_____. 1996. "Economic Transitions and the Exchange Rate Regime.", *American Economic Review*, May: 147-52.

Ul Haque, N., and M. S. Khan. 2000. Do IMF Supported Programs Work? Paper presented at the Claremont-Georgetown Workshops on Improving the Credibility of IMF Programs. Washington, D.C., January 2000.

Vegh, Carlos. 1992. "Stopping High Inflation," IMF Staff Papers, Sept. 626-95

Von Hagen, Jurgen. 1998. "Budget Institutions for Aggregate Fiscal Discipline." ZEI Policy Paper No. B98-01. University of Bonn.

Westbrook, Jilleen. 1999. EMS paper in SWW Exchange Rate Volume

Westbrook, Jilleen, and Thomas D. Willett. 1999. "Exchange Rates as Nominal Anchors: An Overview of the Issues," in Richard Sweeney, Clas Wihlborg, and Thomas D. Willett, eds., *Exchange Rate Policies for Emerging Markets*. Pp. 83-112. Boulder, CO: Westview Press.

Willett, Thomas D. 2001. "Understanding the IMF Debate." *The Independent Review*, Spring: 593-610.

_____. 2000a. "International Financial Markets as Sources of Crisis or Discipline." *Princeton Essays in International Finance*, No.218. Princeton: Princeton University Press, May.

_____. 2000b. "The Need for A Political Economy Capability at the IMF." Paper presented at the Claremont-Georgetown Workshops on Improving the Credibility of IMF Programs. Washington, D.C., January 2000.

_____. 1999. "A Political Economy Analysis of the Masstricht and Stability Pact Fiscal Criteria," in Andrew Hughes Hallett, Michael Hutchison, and Svend Jensen, eds., *Fiscal Aspects of European Monetary Integration*. Pp. 37-66. Cambridge: Cambridge University Press.

_____. 1998. "Credibility and Discipline Effects of Exchange Rates as Nominal Anchors: The Need to Distinguish Temporary from Permanent Pegs." *The World Economy* 21 (August): 803-26.

_____., ed.1988. *Political Business Cycles: The Political Economy of Money, Inflation, and Unemployment*. Durham, N.C.: Duke University Press for the Pacific Research Institute.

_____. 1987. "A New Monetary Constitution? An Evaluation of the Need and Major Alternatives," in James Dorn and Anna Schwartz, eds., *The Search for Stable Money*. Pp. 145-60. Chicago: University of Chicago Press.

Willett, Thomas D., and King Banaian. 1996. "Currency Substitution and Seniorage Considerations in the Choice of Currency Policies," in Paul Mizen and Eric Pentecost, eds., The Macroeconomics of International Currencies, Brookfield, VT: Edward Elgar.

_____.1988. "Model of Political Process and Their Implications for Stagflation: A Public Choice Perspective," in Thomas D. Willett, ed., *Political Business Cycle*. Pp. . Durham, N.C.: Duke University Press for the Pacific Research Institute.

Willett, Thomas D., and John Mullen. 1982. "The Effects of Alternative International Monetary Systems on Inflationary Biases and Macroeconomic Discipline," in Raymond E. Lombra and Willard E. Witte, eds., *Political Economy of International and Domestic Monetary Relations*. Pp. 143-55. Ames, Iowa: Iowa State University Press.

Willett, Thomas D., Manfred Keil W., and Yong Seok Ahn. Forthcoming. "Capital Mobility for Developing Countries May Not Be So High." *Journal of Development Economics*.

Williamson, John. 1996. *The Crawling Band as an Exchange Rate Regime*. Washington, D.C.: Institute for International Economics.

Wise, Carol, and Riordan Roett, eds.2000. *Exchange Rate Politics in Latin America*. Washington, DC: Brookings